ORDER NO. SD83072590C3

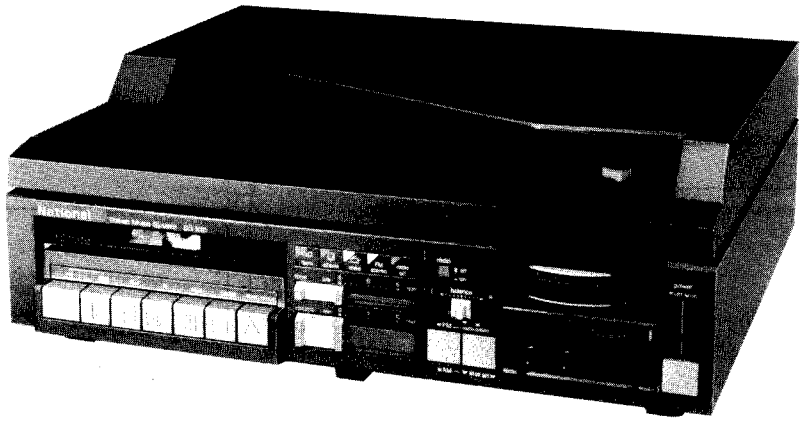
Service Manual

FM/SW/MW/FM STEREO RADIO WITH CASSETTE DECK AND RECORD PLAYER

Stereo Music Centre

SG-X10

(G)



Specifications

AMPLIFIER SECTION

Power Output	PMPO:	20W (10W × 2)
	MPO:	10W (5W × 2)
Output Impedance		8Ω
Input sensitivity & Impedance:		
Mic		1.6 mV, 20 kΩ
Tone Control		+4 dB, −15 dB at 10 kHz

FM TUNER SECTION

Frequency Range	87.5 MHz ~ 108 MHz
Intermediate Frequency (IF)	10.7 MHz
Sensitivity	6 μV (S/N 26 dB, Mod. 40 kHz) (DIN)
Image Ratio	38 dB (98 MHz)
Signal/Noise Ratio	54 dB (at 1 kHz 60 dB, 40 kHz)
Distortion	Mono: 0.3% (at 1 kHz 60 dB, 40 kHz)
	Stereo: 0.5% (at 1 kHz 60 dB, 40 kHz)
Stereo Separation	40 dB (at 1 kHz 60 dB, 40 kHz)

AM TUNER SECTION

Frequency Range	MW:	525 kHz ~ 1605 kHz (571m ~ 187m)
	SW:	5.9 MHz ~ 18 MHz (50.8m ~ 16.7m)
Intermediate Frequency (IF)		450 kHz
Sensitivity	MW:	200 μV/m (1 MHz)
	SW:	20 μV/m (12 MHz)
Image Ratio	MW:	35 dB (1 MHz)
	SW:	10 dB (12 MHz)

TAPE DECK SECTION

Deck System	Auto-Stop Cassette System with Pause Control
Track System	4-Track, 2-Channel
Recording System	AC Bias (50 kHz)
Erasing System	AC Erase (50 kHz)
Tape Speed	4.75 cm/sec. (1-7/8 i.p.s.)
Frequency Response	50 Hz ~ 12 kHz
Wow & Flutter	0.2% (WRMS)
Signal/Noise Ratio	40 dB (DIN)

PHONO SECTION

Turntable System	Belt Drive, Automatic Turntable
Turntable Size	28 cm (11")
Turntable Speed	33-1/3 rpm and 45 rpm
Phono Motor	Electro Governor DC Motor
Cartridge	Ceramic Cartridge (EPC 13STH)
Stylus	Sapphire (EPS 41ST)
Stylus Pressure	6g ± 1g

Power Consumption	28W
Power Supply	AC 110V, 120V, 220V, 240V, 50/60 Hz
Dimensions (W × H × D)	375 mm × 136 mm × 327 mm
Weight	4 kg

National

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka, Japan

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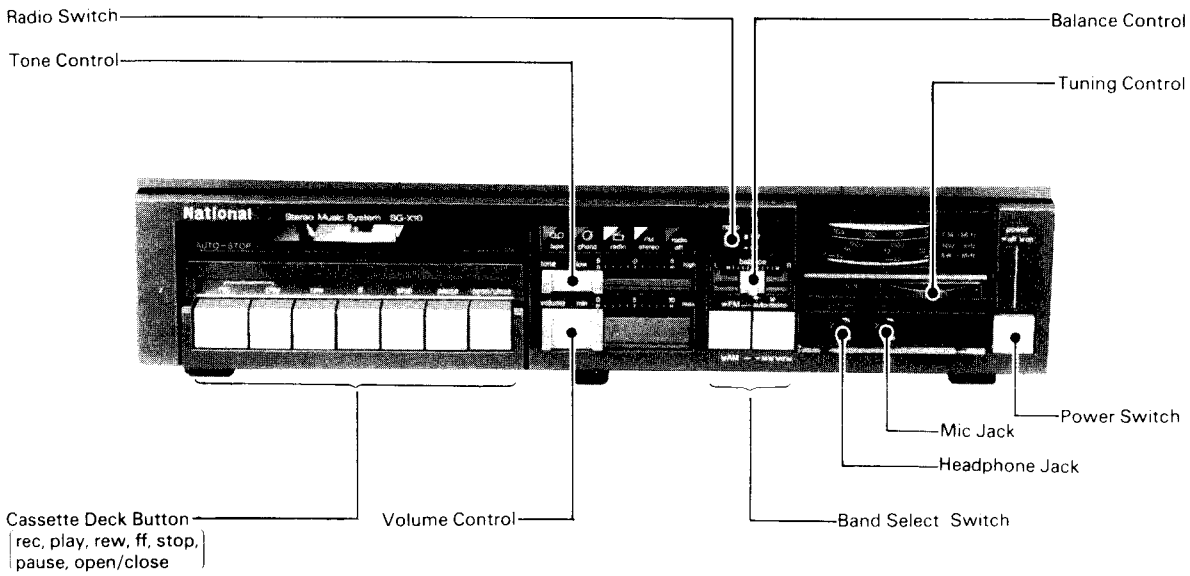
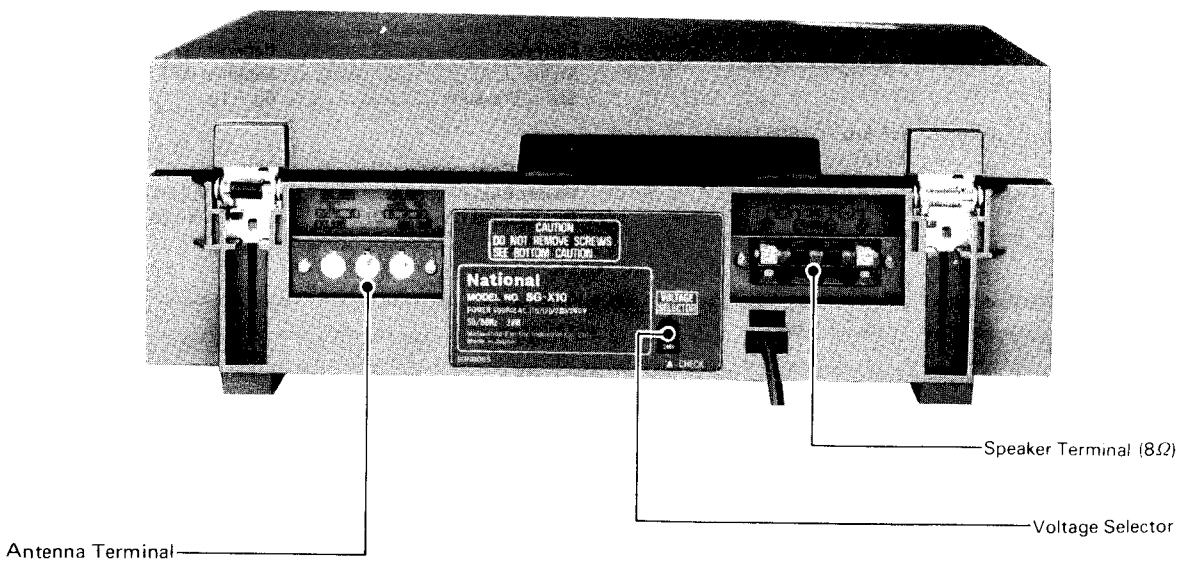
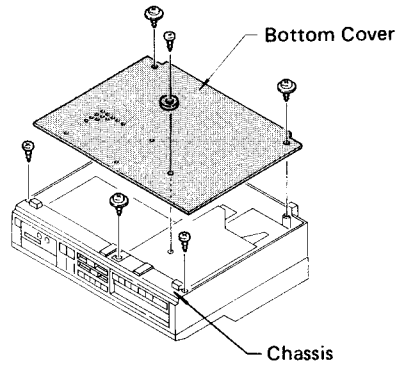
LOCATION OF CONTROLS



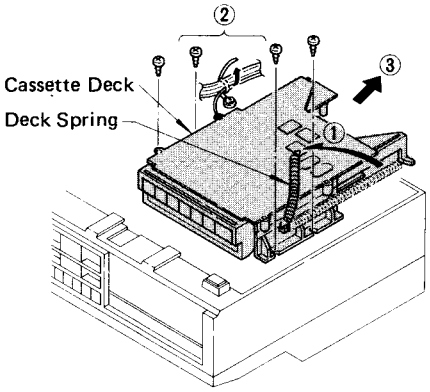


DISASSEMBLY INSTRUCTIONS

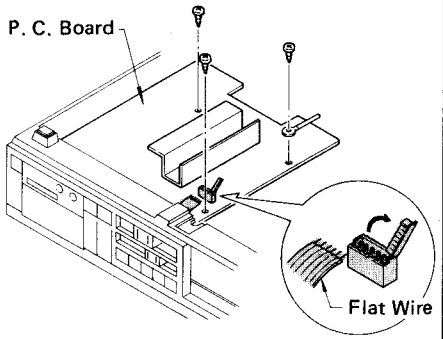
❶ Remove the Bottom Cover



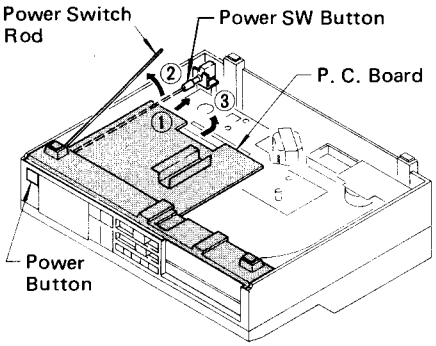
❷ Remove the Cassette Deck



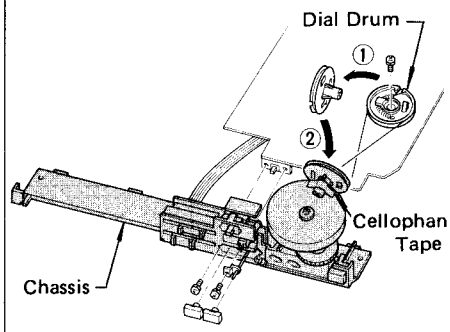
❸ Remove the Screws



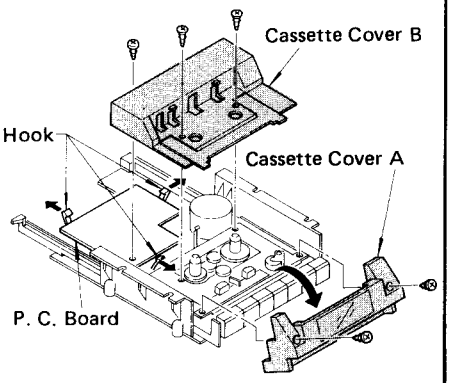
❹ Remove the P. C. Board



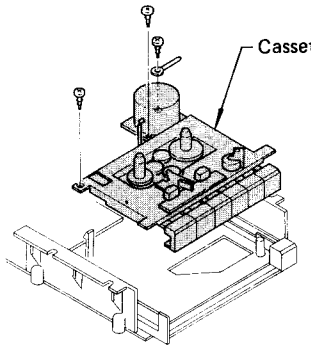
❺ Remove the Chassis



❻ Remove the Cassette Cover



❼ Remove the Cassette Deck



- **To Replace the Parts on P. C. Board**
  - **Main P. C. Board** . . . . . Refer to ❶ ~ ❺
  - **Cassette P. C. Board** . . . . . Refer to ❶, ❷, ❻
- **To Remove the Cassette Deck** . . . . . Refer to ❶, ❷, ❻, ❼

MEASUREMENTS AND ADJUSTMENT

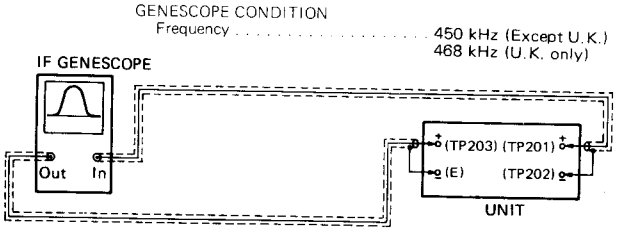
● Radio

Control Positions

Volume Control ..... Audible level of speaker sound (AM-RF, FM-RF); Minimum (AM-IF, FM-IF).
Tone Control ..... Maximum
Balance Control ..... Center
Output of signal generator should be no higher than necessary to obtain output reading.
Make certain that speaker system is connected to the receiver when aligning (or use relivant dummy load resistors).

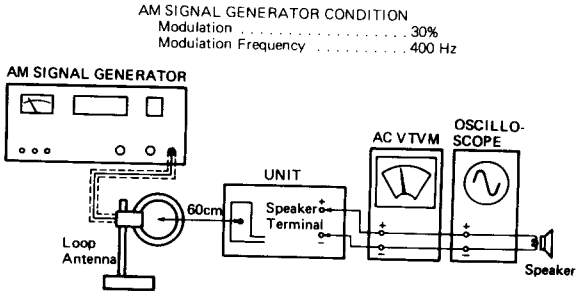
AM-IF ALIGNMENT

1. Test equipment connection is shown in figure.
2. Place unit into MW position.
3. Place the radio dial setting to point of noninterference.
4. Adjust T201 and T202 for maximum output and symmetrical curve.



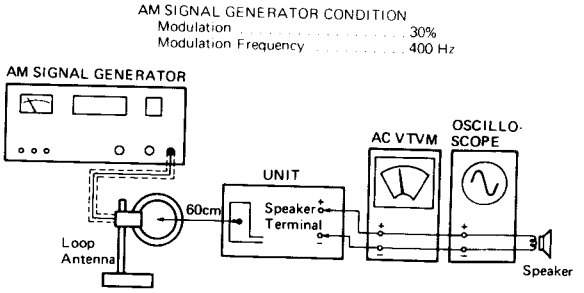
SW-RF ALIGNMENT

1. Test equipment connection is shown in figure.
2. Place unit into SW position.
3. Place the radio dial and signal generator setting to 5.75 MHz.
4. Adjust L204 and L203 for maximum output.
5. Place the radio dial and signal generator setting to 18.8 MHz.
6. Adjust CT204 and CT203 for maximum output.
7. Repeat steps 3. ~ 6.



MW-RF ALIGNMENT

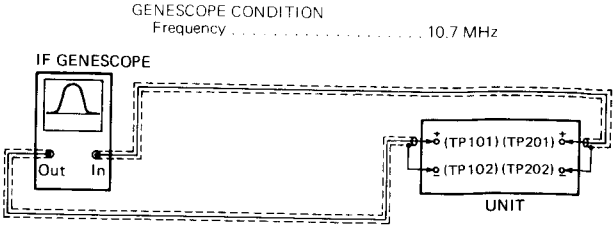
1. Test equipment connection is shown in figure.
2. Place unit into MW position.
3. Place the radio dial and signal generator setting to 513 kHz.
4. Adjust L201 and L202 for maximum output.
5. Place the radio dial and signal generator setting to 1645 kHz.
6. Adjust CT201 and CT202 for maximum output.
7. Repeat steps 3. ~ 6.



FM-IF ALIGNMENT

1. Test equipment connection is shown in figure.
2. Place unit into FM position.
3. Place the radio dial setting to point of noninterference.
4. Adjust T204 for maximum amplitude and symmetrical curve. (Refer to Fig. 1)
5. Adjust T205 for maximum amplitude and proper linearity between about ± 100 kHz markers. (Refer to Fig. 2)

Note: Before aligning, turn the corest of T205 fully counterclockwise.



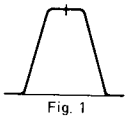


Fig. 1

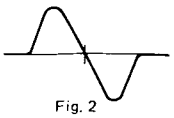


Fig. 2

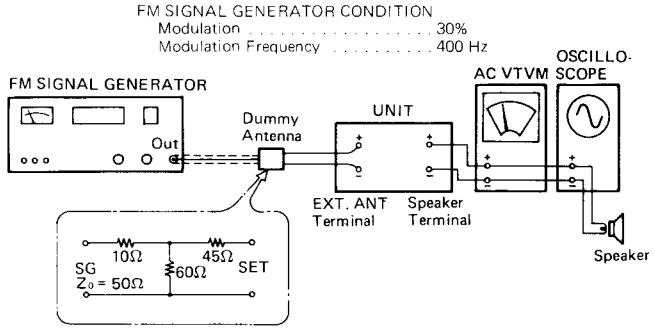
MEASUREMENTS AND ADJUSTMENT

● Radio

FM-RF ALIGNMENT

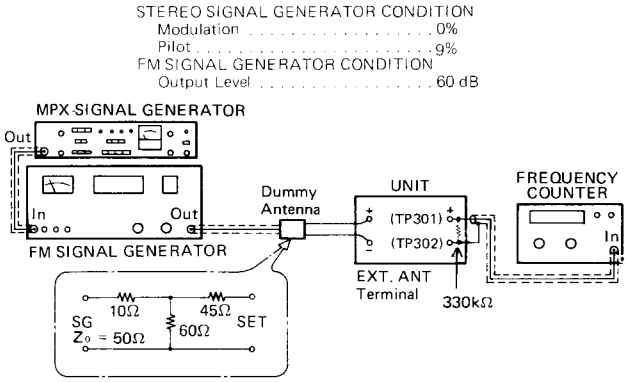
1. Test equipment connection is shown in figure.
2. Place unit into FM position.
3. Place the radio dial and signal generator setting to 87.35 MHz.
   (Set the dial pointer to the left end of the scale or lower frequency edge.)
4. Adjust L101 and L103 for maximum output.
5. Place the radio dial and signal generator setting to 108.3 MHz.
   (Set the dial pointer to the right end of the scale or upper frequency edge.)
6. Adjust CT101 and CT102 for maximum output.
7. Repeat steps 3. ~ 6.

Note: As three output reading will be present, adjustments must be made at center frequency.

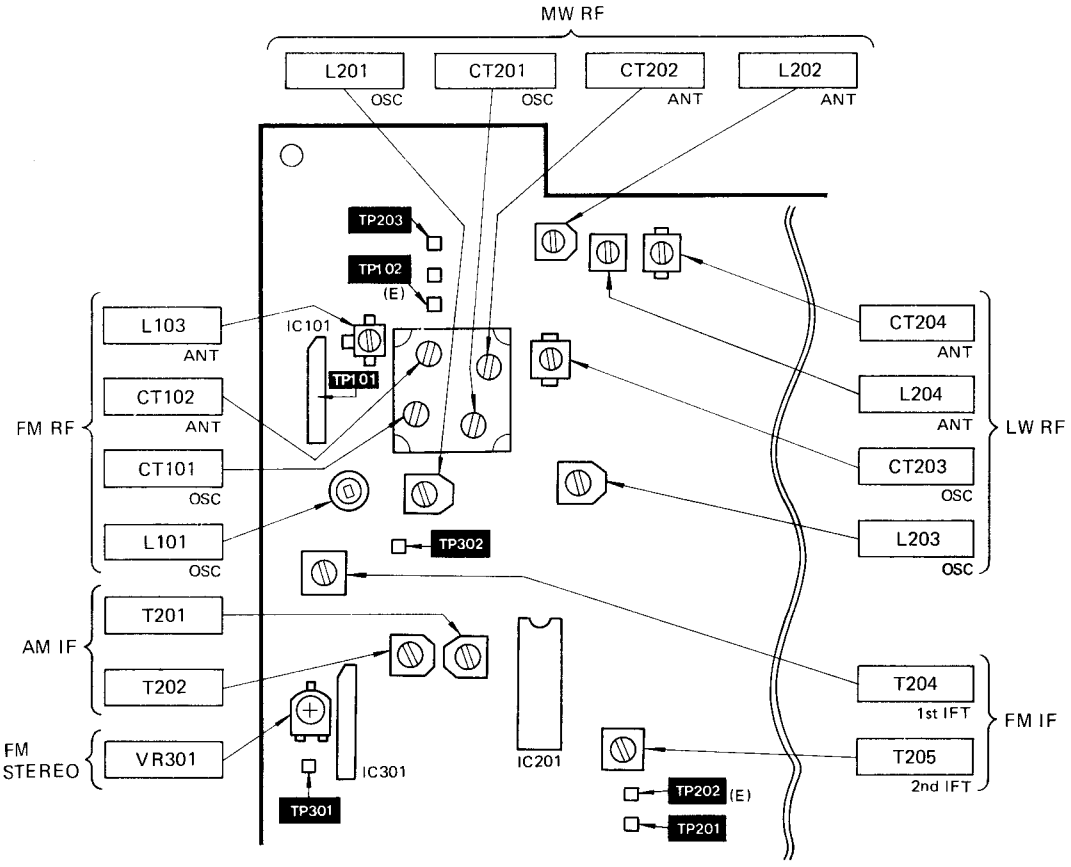


FM STEREO ALIGNMENT (FREE RUN)

1. Test equipment connection is shown in figure.
2. Place unit into FM STEREO position.
3. Place the radio dial and signal generator setting to 98 MHz.
4. Adjust VR301 for 38 kHz ± 100 Hz on frequency counter reading.
5. Tune a stereo broadcast and confirm the frequency stays at 38 kHz.



MAIN PWB

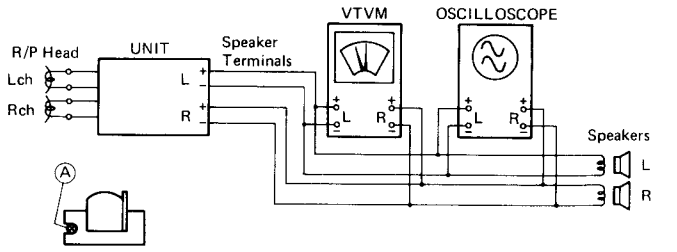


MEASUREMENTS AND ADJUSTMENT

● Tape

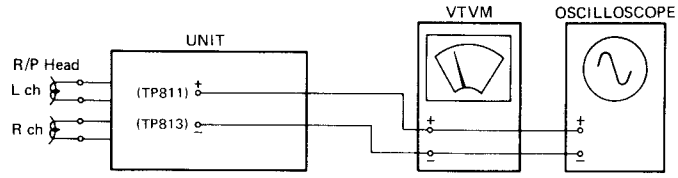
HEAD AZIMUTH ALIGNMENT

1. Test equipment connection is shown in figure.
2. Playback test tape VTT 653. (10 kHz, – 5dB)
3. Adjust screw Ⓐ for maximum indication for equal output on both channels.
4. After alignment, lock the head adjust screw Ⓐ with lacquer.



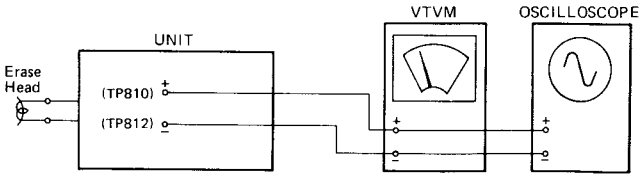
RECORDING BIAS CHECK

1. Test equipment connection is shown in figure.
2. Place unit into TAPE position.
3. Place cassette deck into recording mode.
4. Select W.D.S. to A position.
5. Confirm the recording bias voltage indicates between 3.4 mV to 4.4 mV on VTVM.
6. In the case of voltage indicates lower than 3.4 mV, cut R810.
7. In the case of voltage indicates higher than 4.4 mV, cut R813.

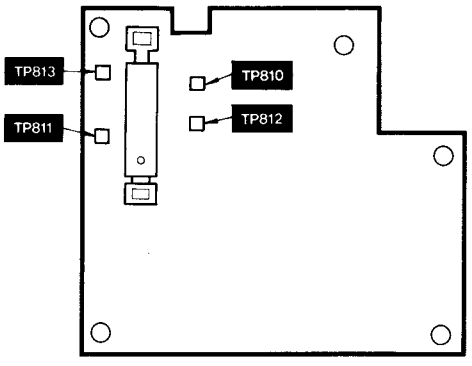


ERASE BIAS CHECK

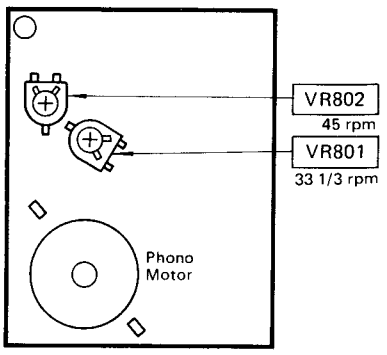
1. Test equipment connection is shown in figure.
2. Place unit into TAPE position.
3. Place cassette deck into recording mode.
4. Select W.D.S. to A position.
5. Confirm the erase bias voltage indicates between 8.5V to 13V.



CASSETTE PWB



PHONO MOTOR PWB

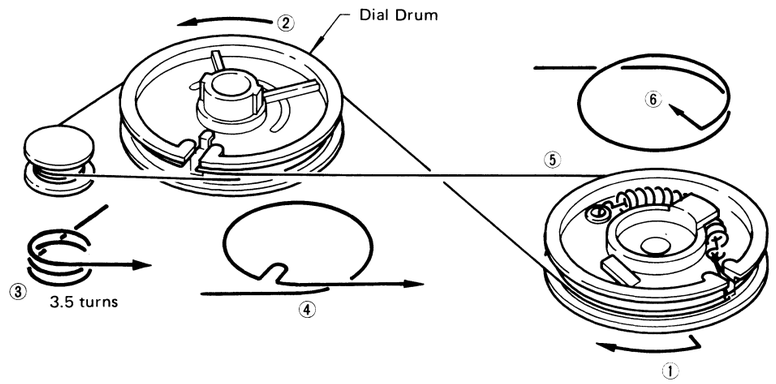


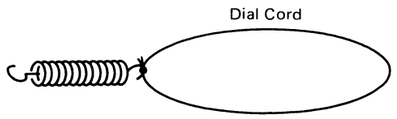
DIAL CORD STRINGING GUIDE

NOTES:

Dial Drum . . . . . .Turn Fully Couterclockwise

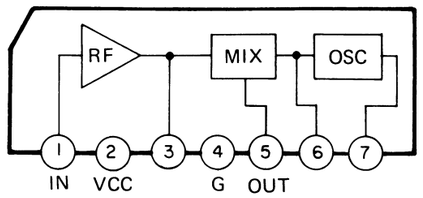
Dial Cord Length . . . . . .75 cm



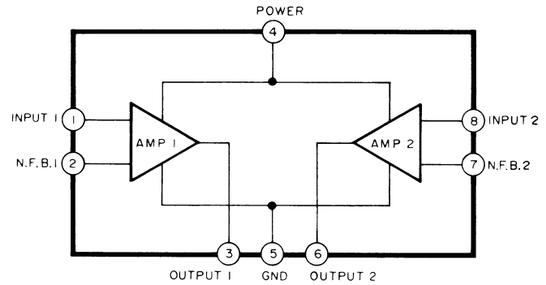


IC BLOCK DIAGRAM

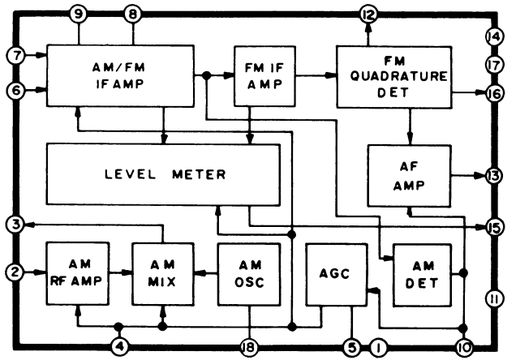
AN7213



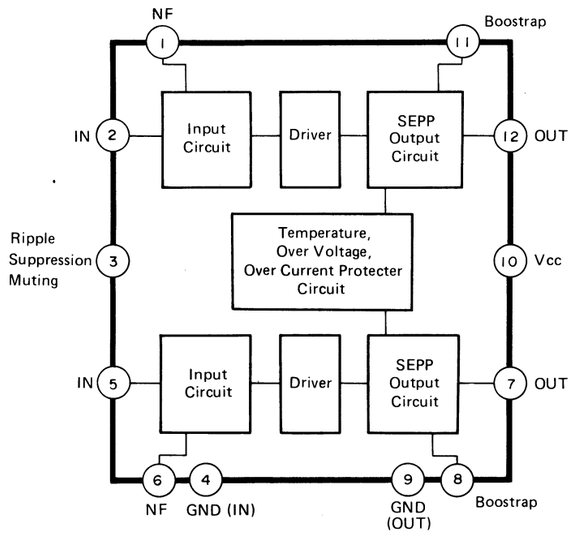
UPC1228H



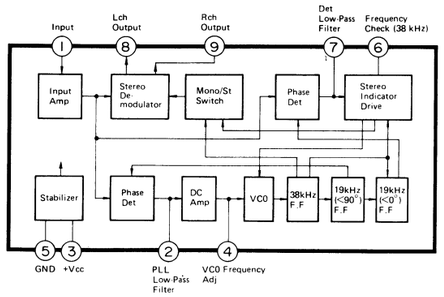
AN7222N



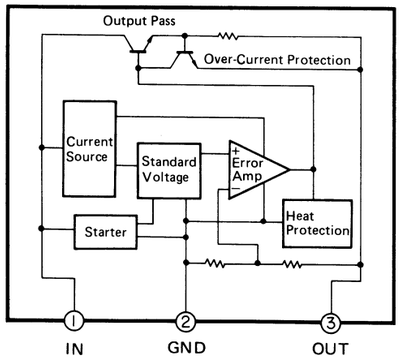
AN7169



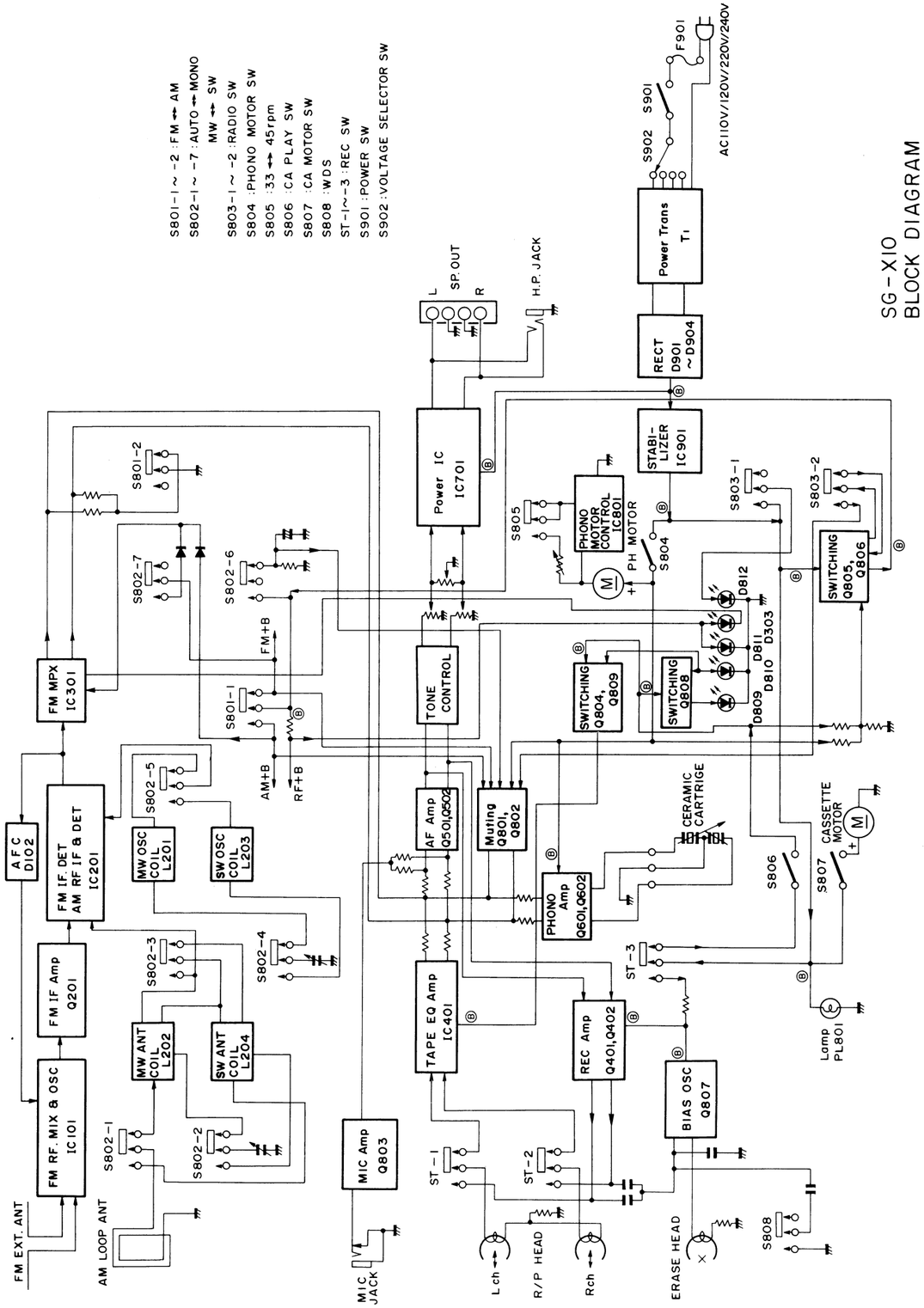
AN7420



AN78M12



BLOCK DIAGRAM



SG-X10
BLOCK DIAGRAM

REPLACEMENT PARTS LIST

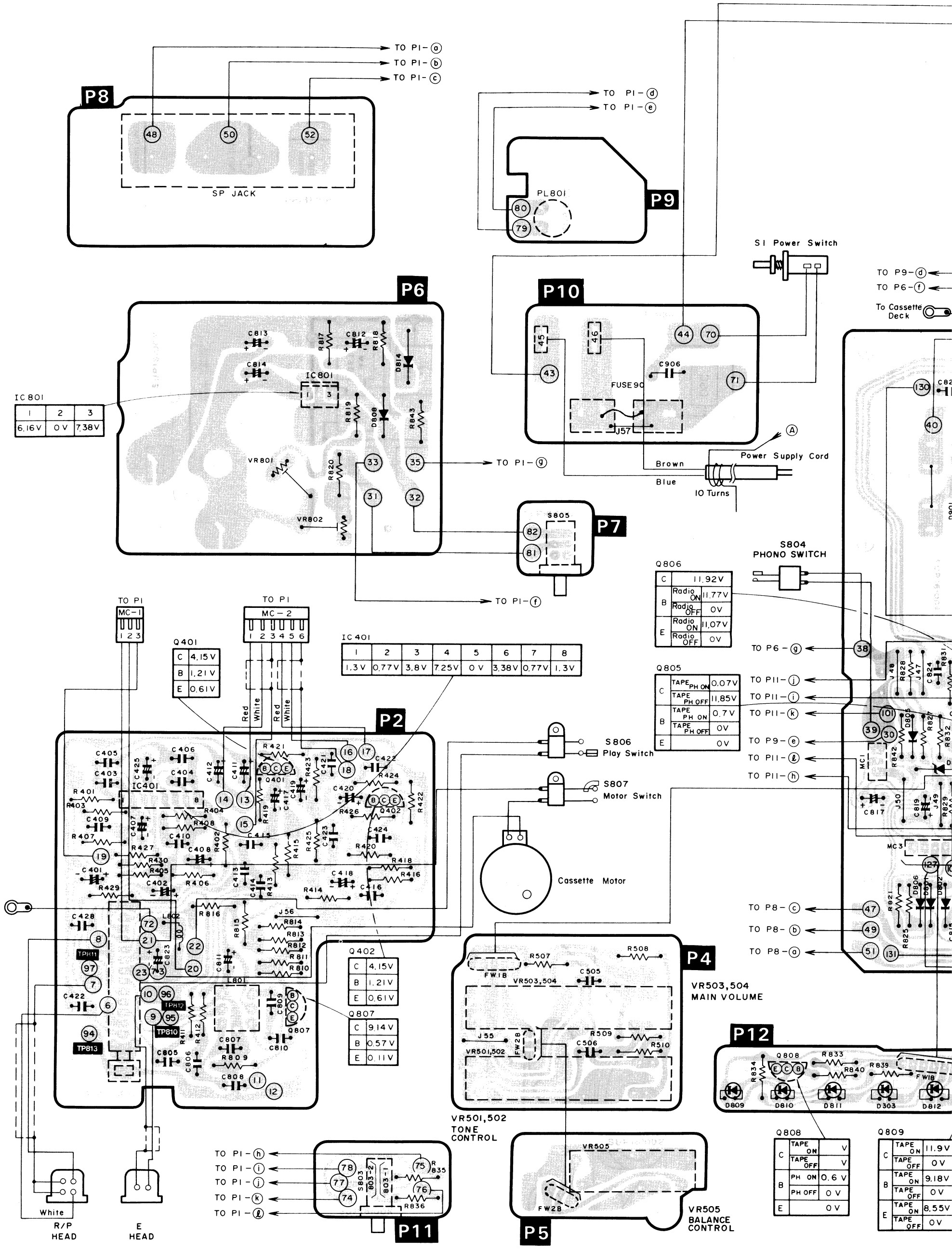
NOTE:
1. Important safety notice:
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
2. Parts No. listed in this Parts List are Service Parts.

Ref No.	Part No.	Description
TRANSISTORS		
Q201	2SC1359-B	FM IF Amp
Q401	2SC945L-P	Rec Amp
Q402	2SC945L-P	Rec Amp
Q501	2SC945L-P	AF Amp
Q502	2SC945L-P	AF Amp
Q601	2SC945L-P	Phono Amp
Q602	2SC945L-P	Phono Amp
Q801	2SD1302-R	Muting
Q802	2SD1302-R	Muting
Q803	2SC945L-P	Mic Amp
Q804	2SC945L-P	Switching
Q805	2SC945L-P	Switching
Q806	2SC945L-P	Switching
Q807	2SD592NC-R	Bias OSC
Q808	2SC945L-P	Switching
Q809	2SC945L-P	Switching
INTEGRATED CIRCUIT		
IC101	AN7213	FM RF
IC201	AN7222	FM/AM IF
IC301	AN7420	MPX
IC401	UPC1228H	Cassette EQ
IC701 ⚠	AN7169	Power
IC801	AN6610	PH Motor Cont
IC901 ⚠	AN78M12	Regulator
DIODES		
D101	MA162A	FM AGC
D102	MA345	AFC
D201 ⚠	DS135TD	Damper
D301	MA162A	Switching
D302	MA162A	Switching
D303	LN255RP	ST EYE Ind
D801	MA162A	Switching
D802	MA162A	Switching
D803	MA162A	Switching
D804	MA162A	Switching
D805	MA162A	Switching
D806	MA162A	Switching
D807	MA162A	Switching
D808 ⚠	DS135TD	Switching
D809	LN355GP	Cassette Ind
D810	LN355GP	Phono Ind
D811	LN355GP	Radio Ind
D812	LN255RP	Radio Mute Ind
D814	MA162A	Switching
D815	MA1091A	AVR
D816	MA1091A	AVR
D901 ⚠	DS135TD	Rect
D902 ⚠	DS135TD	Rect
D903 ⚠	DS135TD	Rect
D904 ⚠	DS135TD	Rect
COILS & TRANSFORMERS		
T1 ⚠	SLT5K58-V	Power Trans
T201	SLI9M102-M	AM IFT
T202	SLI9M202-M	AM IFT
T204	SLI4B108-Z	FM IFT
T205	SLI4B108-Z	FM IFT

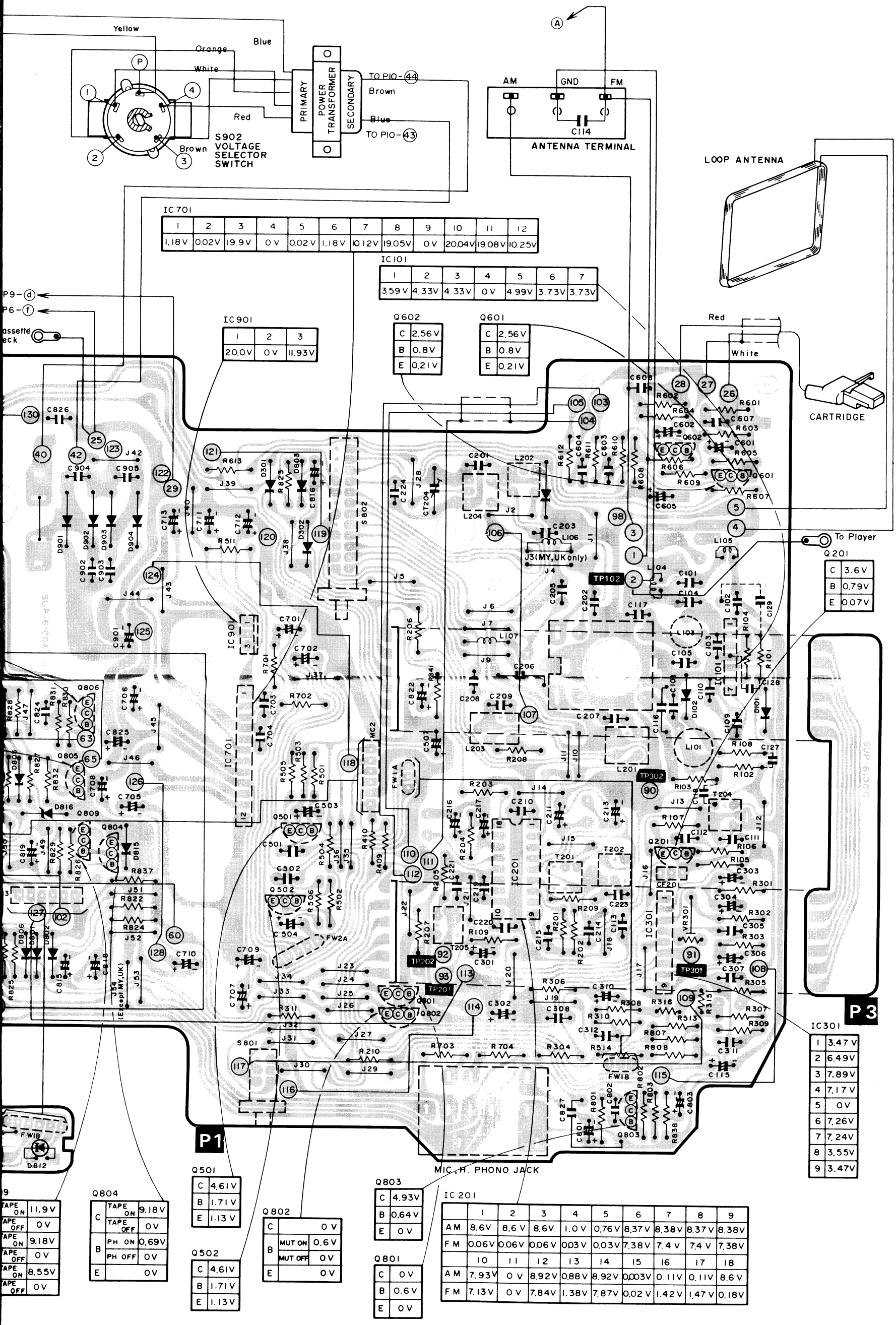
Ref No.	Part No.	Description
L1	SSA4	Loop Ant
L101	SL04P62-P	FM OSC
L103	SLD4N30-M	FM Ant
L104	RLQY15S5-Q	R.F.C.
L105	RLQY25S5-Q	R.F.C.
L201	SL02M16-M	MW OSC
L202	SLA2M2-M	MW Ant
L203	RLQ3M31-K	SW OSC
L204	SLA3M24-M	SW Ant
L801	SL09C10-Z	Bias OSC
L802	SLQU270-4Y	R.F.C.
VARIABLE RESISTORS		
VR301	SVNAA53B2-Q	Variable Resistor
VR501/502	EWAND0S15A54	Tone Volume
VR503/504	EWAND1S15A54	Main Volume
VR505	EWALG0C10G15	Balance Volume
VR801	SVNAA23B2-Q	Variable Resistor
VR802	SVNAA13B2-Q	Variable Resistor
SWITCHES		
S801	SSH166	Push SW
S802	SSH174	Push SW
S803	SSH166	Push SW
S805	SSH164	Push SW
S901 ⚠	ESB8213V	Power SW
S902 ⚠	ESE3742	Voltage Select
ST1 - 4	SSS116	Slide SW
VARIABLE CAPACITORS		
CV101/102/201/202	RCV4RC2VK-M	Variable Capacitor
CT203	RCVCTY12B218	Trimmer
CT204	RCVCTY12B218	Trimmer
CERAMIC FILTER		
CF201	SVFE107MA5	FM CFT
FUSES AND LAMP		
F901 ⚠	XBA2C03TR0	Fuse
PL801	XAMR52X	Lamp

Ref No.	Part No.	Description
ACCESSORIES		
A1	SQX50626	Inst Book
A2	RJP120ZBS-H	Plug Adapter
A3	SPS1HCCNRZ1	Demo Tape
PACKING		
PA1	SPN5472	Carton Box
PA2	SPN5416	Pad, L
PA3	SPN5418-1	Pad, R
PA4	SPN5322	T/T Pad
PA5	SPH6234	Protector A
PA6	SPH6232	Protector B
PA7	SPP230	Set Cover
PA8	SPE54	Handol

CIRCUIT BOARD AND WIRI



WIRING CONNECTION



IC 701

1	2	3	4	5	6	7	8	9	10	11	12
1.18V	0.02V	19.9V	0V	0.02V	1.18V	10.12V	19.05V	0V	20.04V	19.08V	10.25V

IC 101

1	2	3	4	5	6	7
3.59V	4.33V	4.33V	0V	4.99V	3.73V	3.73V

IC 901

1	2	3
20.0V	0V	11.93V

Q602

C	2.56V
B	0.8V
E	0.21V

Q601

C	2.56V
B	0.8V
E	0.21V

Q201

C	3.6V
B	0.79V
E	0.07V

IC 301

1	3.47V
2	6.49V
3	7.89V
4	7.17V
5	0V
6	7.26V
7	7.24V
8	3.55V
9	3.47V

TAPE ON	11.9V
TAPE OFF	0V
TAPE ON	9.18V
TAPE OFF	0V
TAPE ON	8.55V
TAPE OFF	0V

Q804

C	TAPE ON	9.18V
	TAPE OFF	0V
B	PH ON	0.69V
	PH OFF	0V
E		0V

Q501

C	4.61V
B	1.71V
E	1.13V

Q502

C	4.61V
B	1.71V
E	1.13V

Q802

C		0V
B	MUT ON	0.6V
	MUT OFF	0V
E		0V

Q803

C	4.93V
B	0.64V
E	0V

Q801

C	0V
B	0.6V
E	0V

IC 201

	1	2	3	4	5	6	7	8	9
AM	8.6V	8.6V	8.6V	1.0V	0.76V	8.37V	8.38V	8.37V	8.38V
FM	0.06V	0.06V	0.06V	0.03V	0.03V	7.38V	7.4V	7.4V	7.38V
	10	11	12	13	14	15	16	17	18
AM	7.93V	0V	8.92V	0.88V	8.92V	0.003V	0.11V	0.11V	8.6V
FM	7.13V	0V	7.84V	1.38V	7.87V	0.02V	1.42V	1.47V	0.18V

SCHEMATIC DIA

DAMPER
D201 DS135

MIC AMP
Q803 2SC945L

FM RF MIX & OSC
IC101 AN7213

AFC
D102 MA345

FM AGC
D101 MA150

FM IF AMP
Q201 2SC1359

FM/AM RF/IF
IC201 AN7222N

PC
IC7

IC101

3.59	4.33	4.33	0	4.99	3.73	3.73

IC201

FM	0.06	0.06	0.06	0.03	0.03	7.38	7.37	7.4	7.38
AM	8.6	8.6	8.6	1.0	0.76	8.37	8.38	8.37	8.38

AM	8.6	0.11	0.11	0.003	8.92	0.88	8.92	0	7.93
FM	0.18	1.47	1.42	0.02	7.87	1.38	7.84	0	7.13

IC401

1.30	0.77	3.8	7.25	0	3.38	0.77	1.30

IC801

6.16	0	7.38

S802 / S801 / S805 / S806 / S807

0.6	MUT ON
0	MUT OFF

MIC Jack
R/P Lch
HEAD
R/P Rch
ERASE HEAD
PHONO MOTOR
CASSETTE MOTOR
PL 801

CASSETTE AMP
IC401 μPC1228H

BIAS OSC
Q807 2SD592NC

REC AMP
Q401,402 2SC945L

AF AMP
Q501,502 2SC945L

SWITCHING
D801~807 MA150

PHONO AMP
Q601,602 2SC945L

MUTING
Q801,802
2SD1302RS

AOC
IC901 AN78M
Q809 2SC945

PHONO MOTOR
IC801 AN6610

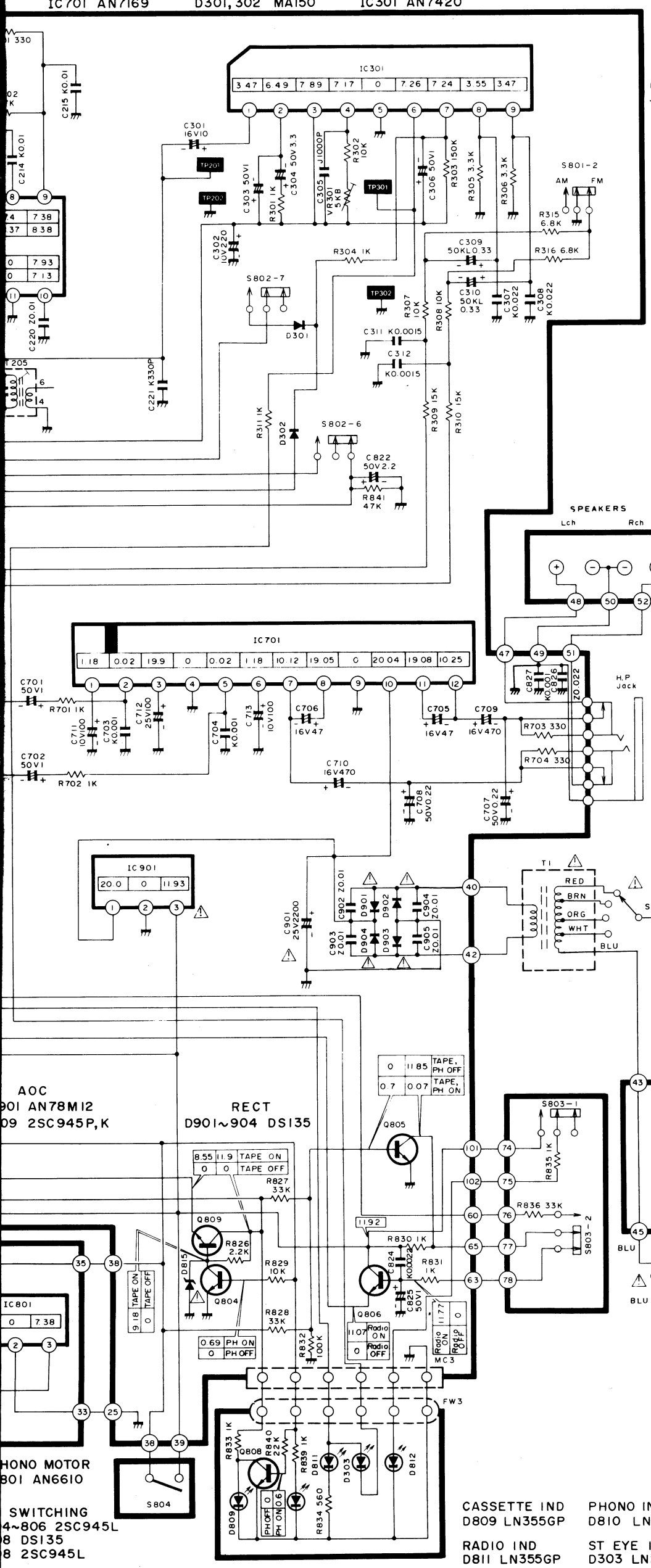
SWITCHING
Q804~806 2SC9
D808 DS135
Q808 2SC945L

DIAGRAM

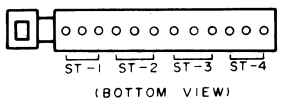
POWER AMP
IC701 AN7169

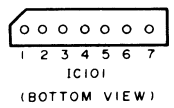
SWITCHING
D301, 302 MA150

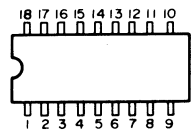
MPX
IC301 AN7420

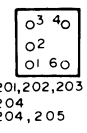


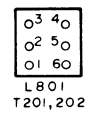
TERMINAL GUIDE

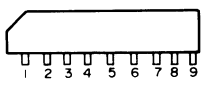


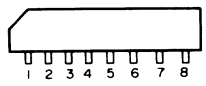


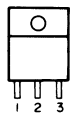


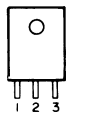


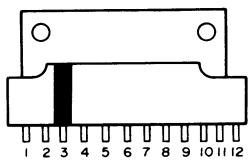


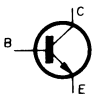


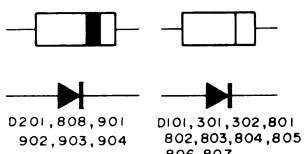


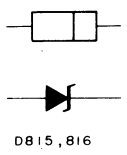


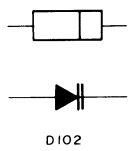












NOTE

1) S901 : POWER SW IN "OFF" POSITION.
   S902 : VOLTAGE SELECT SW
   S801 : FM AND AM SELECT SW IN "FM" POSITION.
   S802 : FM MODE AND MW-SW SELECT SW IN "AUTO-MW" POSITION.
   S803 : RADIO MUTE SW IN "OFF" POSITION.
   S804 : PHONO SELECT SW IN "OFF" POSITION.
   S805 : PHONO SPEED SW IN "33rpm" POSITION.
   S806 : TAPE PLAY SW IN "OFF" POSITION.
   S807 : TAPE MOTOR SW IN "OFF" POSITION.

   ST1~ST3 : TAPE REC SW IN "PLAY" POSITION.
2) COMPONENTS IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFTY, WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY MANUFACTURER'S SPECIFIED PARTS.
3) DC VOLTAGES ARE TO BE MEASURED WITH VTVM UNDER NO SIGNAL CONDITION IN "FM" "AM" "PH" OR "TAPE" POSITION.
4) LETTERS Z, M, K, J INDICATS TORERANCE OF CAPACITORS AS FOLLOWS. Z=+80%, −20%, M=±20%, K=±10%, J=±1%

CASSETTE IND
D809 LN355GP

PHONO IND
D810 LN355GP

RADIO MUTE IND
D812 LN255RP

RADIO IND
D811 LN355GP

ST EYE IND
D303 LN255RP

SCHEMATIC DIAGRAM
MODEL NO. SG-X10(G)

REPLACEMENT PARTS LIST

Numbering System of Resistor

Type	Wattage	Tolerance	Value
Three Letters	One or Two Letters	Two or Three Letters	Three or Four Letters

Example: E R D — 2 5 — T J — 1 0 1

Resistor Type		Wattage		Tolerance	
ERD:	Carbon Film	1:	1W	F:	±1%
ERC:	Solid	2:	2W	J:	±5%
ERX:	Metal Film	12:	1/2W	K:	±10%
ERG:	Megal Oxide Film	18:	1/8W		
ERO:	High Stability Metal Film	25:	1/4W		
ERF:	Flameproof Wire-Wound Bath-Tube				
ERQ:	Fuse Type Metal Film	50:	1/2W		
RRD:	Chip	2F:	1/4W		

Ref No.	Part No.	Description (Unit: Ω)
R101	ERD25FJ331	330
R102	ERD25FJ221	220
R103	ERD25FJ222	2.2k
R104	ERD25TJ393	39k
R105	ERD25FJ102	1k
R106	ERD25TJ224	220k
R107	ERD25FJ470	47
R108	ERD25TJ474	470k
R109	ERD25TJ474	470k
R201	ERD25FJ331	330
R202	ERD25FJ272	2.7k
R203	ERD25FJ470	47
R204	ERD25FJ822	8.2k
R205	ERD25FJ562	5.6k
R206	ERD25FJ561	560
R207	ERD25FJ151	150
R208	ERD25FJ222	2.2k
R209	ERD25FJ102	1k
R210	ERD25FJ152	1.5k
R301	ERD25FJ102	1k
R302	ERD25FJ103	10k
R303	ERD25TJ154	150k
R304	ERD25FJ102	1k
R305	ERD25FJ332	3.3k
R306	ERD25FJ332	3.3k
R307	ERD25FJ103	10k
R308	ERD25FJ103	10k
R309	ERD25FJ153	15k
R310	ERD25FJ153	15k
R311	ERD25FJ102	1k
R315	ERD25FJ682	6.8k
R316	ERD25FJ682	6.8k
R401	ERD25FJ102	1k
R402	ERD25FJ102	1k
R403	ERD25FJ123	12k
R404	ERD25FJ123	12k
R405	ERD25FJ680	68
R406	ERD25FJ680	68
R407	ERD25TJ334	330k
R408	ERD25TJ334	330k
R409	ERD25FJ153	15k
R410	ERD25FJ153	15k
R411	ERD25FJ682	6.8k
R412	ERD25FJ682	6.8k
R413	ERD25FJ682	6.8k
R414	ERD25FJ682	6.8k
R415	ERD25FJ561	560
R416	ERD25FJ681	680
R418	ERD25FJ332	3.3k
R419	ERD25TJ105	1M
R420	ERD25TJ105	1M
R421	ERD25FJ472	4.7k
R422	ERD25FJ472	4.7k
R423	ERD25TJ273	27k
R424	ERD25TJ273	27k
R425	ERD25FJ333	33k
R426	ERD25FJ333	33k
R427	ERD25FJ221	220
R429	ERD25FJ4R7	4.7
R430	ERD25FJ153	15k
R501	ERD25TJ105	1M
R502	ERD25TJ105	1M
R503	ERD25FJ472	4.7k
R504	ERD25FJ472	4.7k
R505	ERD25FJ102	1k
R506	ERD25FJ102	1k
R507	ERD25FJ333	33k
R508	ERD25FJ333	33k
R509	ERD25FJ183	18k
R510	ERD25FJ183	18k
R511	ERD25FJ331	330
R513	ERD25FJ153	15k
R514	ERD25FJ153	15k
R601	ERD25TJ225	2.2M
R602	ERD25TJ225	2.2M
R603	ERD25TJ474	470k
R604	ERD25TJ474	470k
R605	ERD25TJ155	1.5M
R606	ERD25TJ155	1.5M
R607	ERD25FJ822	8.2k
R608	ERD25FJ822	8.2k
R609	ERD25FJ681	680
R610	ERD25FJ681	680
R611	ERD25FJ473	47k
R612	ERD25FJ473	47k
R613	ERD25FJ222	2.2k
R701	ERD25FJ102	1k
R702	ERD25FJ102	1k
R703	ERD25FJ331	330
R704	ERD25FJ331	330
R801	ERD25FJ102	1k
R802	ERD25TJ474	470k
R803	ERD25FJ152	1.5k
R807	ERD25TJ683	68k
R808	ERD25TJ683	68k
R809	ERD25FJ4R7	4.7
R810	ERD25FJ223	22k
R811	ERD25FJ223	22k
R812	ERD25FJ103	10k
R813	ERD25FJ473	47k
R814	ERD25FJ472	4.7k
R815	ERD25FJ103	10k
R816	ERD25FJ101	100
R817	ERD25FJ472	4.7k
R818	ERD25FJ152	1.5k
R819	ERD25FJ561	560
R820	ERD25FJ561	560
R821	ERD25FJ333	33k
R822	ERD25FJ333	33k
R823	ERD25FJ333	33k
R824	ERD25FJ333	33k
R825	ERD25FJ333	33k
R826	ERD25FJ222	2.2k
R827	ERD25FJ333	33k
R828	ERD25FJ333	33k
R829	ERD25FJ103	10k
R830	ERD25FJ102	1k
R831	ERD25FJ102	1k
R832	ERD25TJ104	100k
R833	ERD25FJ102	1k
R834	ERD25FJ561	560
R835	ERD25FJ102	1k
R836	ERD25FJ333	33k
R837	ERD25FJ333	33k
R838	ERD25FJ103	10k
R839	ERD25FJ102	1k
R840	ERD25FJ223	22k
R841	ERD25FJ473	47k
R842	ERD25FJ471	470

REPLACEMENT PARTS LIST

Numbering System of Capacitor

Type	Voltage	Volue	Tolerance
Four Letters	One or Two Letters	Two to Five Letters	One or Two Letters

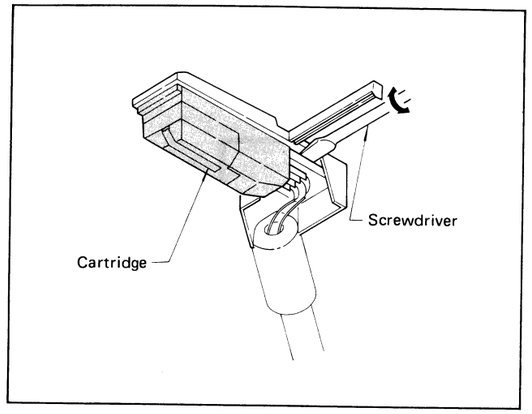
Example: E C K D — 1 H — 3 3 3 — M D

Capacitor Type		Voltage		Tolerance	
ECCD:	Temperature Compensating Ceramic			C:	±0.25pF
ECKD:	High Dielectic Consant Ceramic			D:	±0.5pF
ECQM:	Polyester	0J:	6.3V	F:	±1 pF
ECQP:	Polypropylene Film	1A:	10V	J:	±5%
ECQS:	Polystyrene Film	1C:	16V	K:	±10%
ECFD:	Semiconductor Ceramic	1E:	25V	M:	±20%
ECEA:	Electrolytic	1H	50V	P:	+ 100, − 0%
ECEB:	Electrolytic	1V:	63V	Z:	+ 80, −20%
ECET:	Electrolytic	2H:	100V		
ECSF:	Tantalum	25:	25V		
ECUX:	Chip	50:	50V		

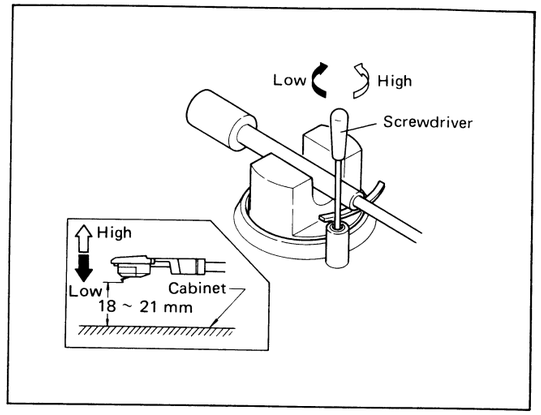
Ref No.	Part No.	Description (Unit: μF)
C101	ECCD1H220K	22pF
C102	ECCD1H100KC	10pF
C103	ECKD1H223ZF	0.022
C104	ECFR1V103KDY	0.01
C105	ECCD1H220K	22pF
C108	ECKD1H223ZF	0.022
C109	ECCD1H050KC	5pF
C110	ECCD1H150KC	15pF
C111	ECKD1H223ZF	0.022
C112	ECKD1H103ZF	0.01
C113	ECKD1H223ZF	0.022
C114	ECCD1H220KC	22pF
C115	ECEA1AS101	100
C116	ECCD1H150KU	15pF
C117	ECCD1H030CC	3pF
C202	ECCD1H100KC	10pF
C203	ECKD1H223ZF	0.022
C205	ECCD1H100KC	10pF
C206	ECCW1H200KSY	20pF
C207	ECQP1361JZ	360pF
C208	ECQP1392JZ	3900pF
C210	ECKD1H223ZF	0.022
C211	ECEA1AS470	47
C213	ECEA50Z4R7	4.7
C214	ECFR1V103KDY	0.01
C215	ECFR1V103KDY	0.01
C216	ECEA1CS330	33
C217	ECEA1HS100	10
C219	ECKD1H223ZF	0.022
C220	ECKD1H103ZF	0.01
C221	ECKD1H331KB	330pF
C223	ECKD1H102KB	0.001
C301	ECEA1HS100	10
C302	ECEA1AS221	220
C303	ECEA50Z1	1
C304	ECEA50Z3R3	3.3
C305	ECQP1102JZ	0.001
C306	ECEA50Z1	1
C307	ECFD1V223KD	0.022
C308	ECFD1V223KD	0.022
C310	ECEA50MR33R	0.33
C311	ECKD1H152KB	0.0015
C312	ECKD1H152KB	0.0015
C401	ECEA50M1R	1
C402	ECEA50M1R	1
C403	ECKD1H102KB	0.001
C404	ECKD1H102KB	0.001
C405	ECKD1H102KB	0.001
C406	ECKD1H102KB	0.001
C407	ECEA1AS470	47
C408	ECEA1AS470	47
C409	ECFR1V103KDY	0.01
C410	ECFR1V103KDY	0.01
C411	ECEA50ZR22	0.22
C412	ECEA50ZR22	0.22
C413	ECKD1H102KB	0.001
C414	ECKD1H102KB	0.001
C415	ECKD1H102KB	0.001
C416	ECKD1H102KB	0.001
C417	ECEA50Z1	1
C418	ECEA50Z1	1
C419	ECEA50Z1	1
C420	ECEA50Z1	1
C421	ECKD1H222KB	0.0022
C422	ECKD1H222KB	0.0022
C423	ECFR1V473KDY	0.047
C424	ECFR1V473KDY	0.047
C425	ECEA1CS330	33
C427	ECKD1H152KB	0.0015
C428	ECKD1H152KB	0.0015
C501	ECFR1V333KDY	0.033
C502	ECFR1V333KDY	0.033
C503	ECEA50Z1	1
C504	ECEA50Z1	1
C505	ECKR1H682KBY	0.0068
C506	ECKR1H682KBY	0.0068
C507	ECEA1AS471	470
C601	ECEA50MR1R	0.1
C602	ECEA50MR1R	0.1
C603	ECFR1V333KDY	0.033
C604	ECFR1V333KDY	0.033
C605	ECEA1ES470	47
C607	ECCD1H150KC	15pF
C608	ECCD1H150KC	15pF
C701	ECEA50Z1	1
C702	ECEA50Z1	1
C703	ECKD1H102KB	0.001
C704	ECKD1H102KB	0.001
C705	ECEA1ES470	47
C706	ECEA1ES470	47
C707	ECEA50ZR22	0.22
C708	ECEA50ZR22	0.22
C709	ECEA1AS471	470
C710	ECEA1AS471	470
C711	ECEA1AS101	100
C712	ECEA1ES101	100
C713	ECEA1AS101	100
C801	ECEA50Z1	1
C802	ECFR1V473KDY	0.047
C803	ECEA50MR33R	0.33
C805	ECKD1H181KB	180pF
C806	ECKD1H181KB	180pF
C807	ECQM1H822JZ	0.0082
C809	ECQM1H123JZ	0.012
C810	ECQM1H683JZ	0.068
C811	ECEA1AS471	470
C812	ECEA1ES470	47
C813	ECEA50Z1	1
C814	ECEA50Z3R3	3.3
C815	ECEA50Z4R7	4.7
C816	ECEA50Z4R7	4.7
C817	ECEA50Z4R7	4.7
C818	ECEA50Z4R7	4.7
C819	ECEA1HS100	10
C822	ECEA1HS2R2	2.2
C823	ECEA1ES101	100
C824	ECKD1H222KB	0.0022
C825	ECEA50Z1	1
C826	ECKD1H223ZF	0.022
C827	ECKD1H221KB	220pF
C901 ⚠	ECEA1ES222	2200
C902	ECKD1H103ZF	0.01
C903	ECKD1H103ZF	0.01
C904	ECKD1H103ZF	0.01
C905	ECKD1H103ZF	0.01

SERVICING THE RECORD PLAYER

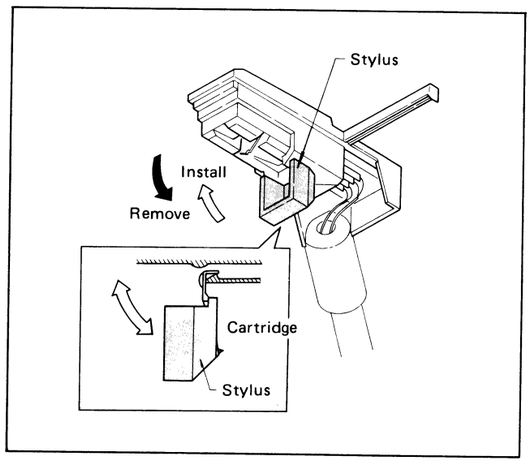
■ CARTRIDGE REPLACEMENT



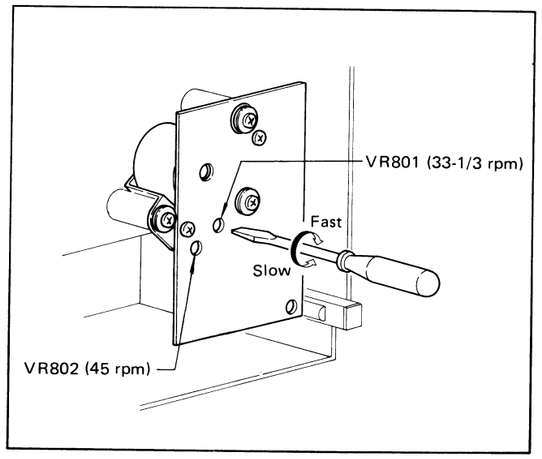
■ TONE ARM LIFTING HEIGHT ADJUSTMENT



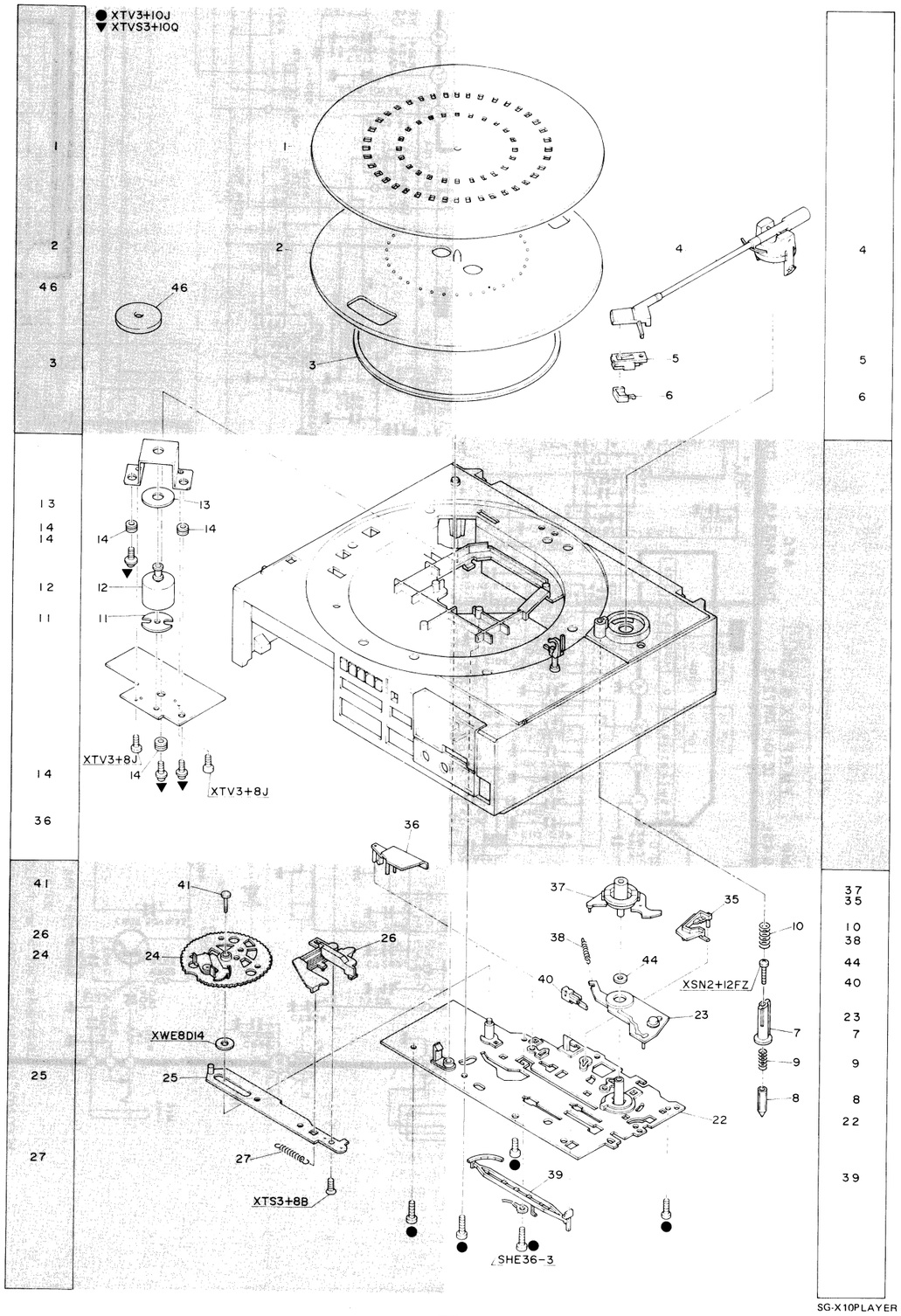
■ STYLUS REPLACEMENT



■ MOTOR SPEED ADJUSTMENT



EXPLODED VIEW OF RECORD PLAYER



SG-X10PLAYER

REPLACEMENT PARTS LIST OF CABINET AND CHASSIS

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SYK2080-5	Cabinet Ass'y	1
2	SKU6741	Bottom Cover	1
3	SYE1080	Dust Cover Ass'y	1
4	SBH9136	Hinge (L)	1
5	SBH9136-1	Hinge (R)	1
6	SHG9246-1	Cap	1
7	SBN1116	Knob, Tuning	1
8	SKD5966	Dial Scale	1
9	SBN1118-1	Knob, Volume	1
10	SBN1120-1	Knob, Tone	1
11	SBC536-1	Button, Band	2
12	SBC538-1	Button, Speed	1
13	SBC552-1	Button, Radio ON-OFF	1
14	SBC554-1	Button, Power	1
15	SBC1128	Knob, Balance	1
16	SDD42	Drum, Dial	1
17	SDR22	Roller, Scale	1
18	SDR24	Roller, Tuning	1
19	SNW852	Washer	1
20	SUH156	Rod, Power Switch	1
21	RDS4170A	Spring, Drum	1
22 ⚠	SHR134	Clamp, Power Cord	1
25	SUH168	Rod, Band Switch	1
26	SUD438	Spacer	4
29 ⚠	RJA9YA-F	Power Cord	1
30	SJF4308	Terminal, ANT	1
31	SJF9428	Terminal, Speaker	1
32	SJJ106	Jack, Headphone/Mic	2
33 ⚠	SJF110	Fuse Holder	2
34	SXE264	Chassis Ass'y	1

Items of Assembly Parts.

Ref. No.	Part No.	Description	Per Set (pcs.)
1	**SYK2080-5**	**Cabinet Ass'y**	**1**
1	SYK2080-1	Cabinet	(1)
		Foot	(2)
		Label, Stylus	(1)
		Transparent Cover A	(1)
		Ornament	(1)
		Transparent Cover B	(1)
		Reflector Plate	(1)
		Arm Rest	(1)
		Name Plate	(1)
3	**SYE1080**	**Dust Cover Ass'y**	**1**
		Dust Cover	(1)
		Tined Cover	(1)
		Ornament	(1)
34	**SXE264**	Chassis Ass'y	1
		Chassis	(1)
		Foot	(1)

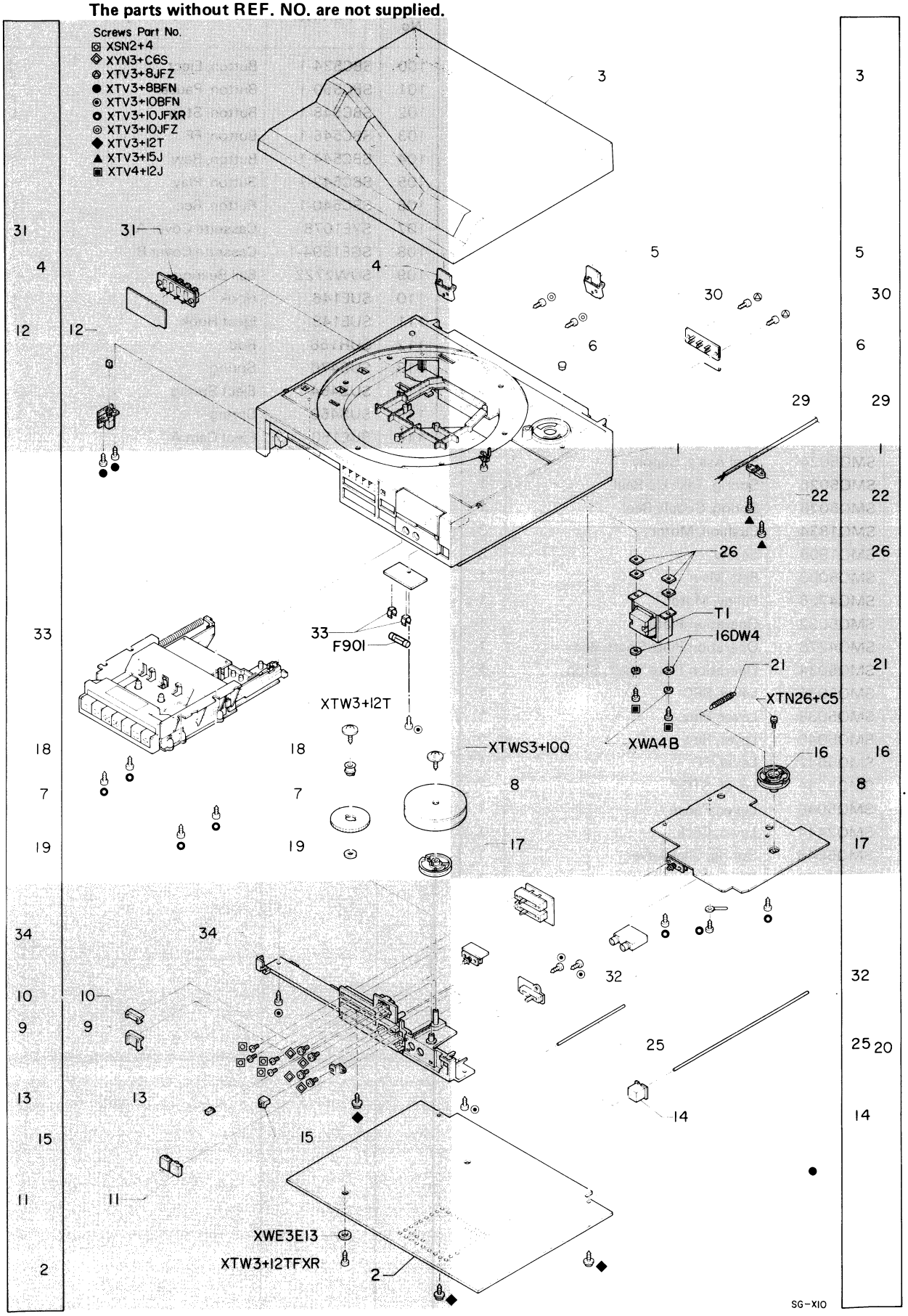
REPLACEMENT PARTS LIST OF RECORD PLAYER

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SJY4068	Rubber Mat	1
2	SJY510	Turntable	1
3	SJY90080	T/T Belt	1
4	EPA641STF	Tone Arm	1
5	EPC13STH	Cartridge	1
6	EPS41ST	Stylus	1
7	SJY5196-2	Lifter	1
8	SJY90034	Lifter Pin	1
9	SJY90160	Spring	1
10	SUS84-2	Spring	1
11	SJY90322	Motor Spacer	1
12	MMNX10E	Motor	1
13	SJY90324	Motor Rubber	1
14	SHG9238	Rubber Cushion	3
22	SJY512	Base Plate	1
23	SJY514	PU Moving Plate	1
24	SJY416	Main Gear Ass'y	1
25	SJY496	Operating Plate	1
26	SJY90014-2	Bracket	1
27	SJY90406	Spring	1
35	SJY90098-1	Operating Plate	1
36	SJY90028-4	Operating Plate	1
37	SJY90030-1	Tone Arm Plate	1
38	SJY90072	Spring	1
39	SJY90032-1	Actuating Plate	1
40	SSP66	Switch	1
41	SHR9174	Stopper Pin	1
44	SNW622-3	Washer	1
46	SJY5018-1	EP Adaptor	1

Ref. No.	Part No.	Description	Per Set (pcs.)

PARTS LOCATION OF CABINET AND CHASSIS

The parts without REF. NO. are not supplied.



REPLACEMENT PARTS LIST OF CASSETTE TAPE DECK

Ref. No.	Part No.	Description	Per Set (pcs.)
1	SMQ4778	Rec Safety Lever	1
2	SMQ4332	Rec Plate Spring	1
3	SMQ4596	Spring, Head	1
4	SMQ5002	Spring, Head Panel	1
5	SMQ5004	Head Base	1
6	SMQ5006	Sensing Piece	1
7	SMQ5008	Pinch Roller Ass'y	1
8	SMQ5010	RF Clutch Ass'y	1
9	SMQ4774	Stopper	1
10	SMQ5012	Roller Shaft Bracket Ass'y w/SP	1
11	SMQ5014	Collar, Take Up Roller	1
12	SMQ4810	Gear, FF	1
13	SMQ5016	Flywheel Ass'y	1
14	SMQ5018	Spring, Flywheel	1
15	SMQ5020	Washer	1
16	SMQ2538	Plate, Flywheel	1
17	SMQ5022	Take Up Reel Ass'y	1
18	SMQ5024	Reel Ass'y, Supply	1
19	SMQ5026	Spring, Take Up Reel	1
20	SMQ5028	Spring, Supply Reel	1
21	SMQ1834	Cushion, Motor	3
22	SMQ1908	Screw	3
23	SMQ5030	Belt, Main	1
24	SMQ4726	Pulley, Motor	1
25	SMQ5032	Operation Plate	1
26	SMQ4276	Operation Plate Shaft, Rec	1
27	SMQ5034	Operation Plate Shaft, Stop	1
28	SMQ5036	Lever, REC	1
29	SMQ5038	Lever, Play	1
30	SMQ5040	Lever, Rew	1
31	SMQ5042	Lever, FF	1
32	SMQ5044	Lever, STOP	1
33	SMQ5046	Lever, Pause	1
34	SMQ2444	Lever, Click	1
35	SMQ5048	Spring, Click Lever	1
36	SMQ4862	Stopper	1
37	SMQ5050	Spring, Rec/Stop	2
38	SMQ5052	Spring, Rew	1
39	SMQ5054	Spring, FF	1
40	SMQ5056	Spring, Play/Pause	2
41	SMQ5058	Plate Spring	1
42	SMQ5060	Switch, Motor	1
43	SMQ5062	Switch, Play	1
44	MMI5A2R	Motor	1
45	SJH92	R/P Head	1
46	SJH94	E. Head	1
47	SMQ5064	Button Base, R	1
48	SMQ5434	Button Base, L	1
49	SMQ4930	Washer, FF Gear	1
50	SMQ4928	Washer, Reel Shaft	2
51	SMQ1402	Washer, Pulley	1
52	SMQ5068	Screw	1
53	SMQ5070	Screw	1

Ref. No.	Part No.	Description	Per Set (pcs.)
100	SBC534-1	Button, Eject	1
101	SBC550-1	Button, Pause	1
102	SBC548-1	Button, Stop	1
103	SBC546-1	Button, FF	1
104	SBC544-1	Button, Rew	1
105	SBC542-1	Button, Play	1
106	SBC540-1	Button, Rec	1
107	SYE1078	Cassette Cover A	1
108	SGE1594-1	Cassette Cover B	1
109	SUW2722	Ball Bearing	8
110	SUE146	Hook	1
111	SUE148	Eject Hook	1
112	SUH158	Rod	1
113	SUS476	Spring	1
114	SUS454	Eject Spring	1
115	SUS458	Spring	1
116	SUE150	Eject Cam A	1
117	SUE152	Eject Cam B	1
118	SUS460-2	Eject Spring	1

EXPLODED VIEW OF CASSETTE TAPE DECK

NOTE*: This screw is turn free mechanism if tightened completely.